

WHAT IS CLAIMED IS:

1. A semiconductor device, comprising:

a thin film transistor formed on an insulating surface of a substrate; and

5 a diamond-like carbon film formed on a back surface of the substrate.

2. A semiconductor device according to claim 1, wherein the substrate is a quartz substrate.

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3. A device according to claim 1, wherein the diamond-like carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

4. A device according to claim 1, wherein said semiconductor  
5 device is an active matrix type display device having a pixel region and a driver region on the substrate.

5. A device according to claim 1, wherein said semiconductor device is selected from the group consisting of a personal computer, a  
10 video camera, a mobile computer, a goggles-type display, a player apparatus having a recording medium, a digital camera, a front type projector, and a rear type projector.

6. A semiconductor device, comprising:

a diamond-like carbon film formed on an insulating surface  
of a substrate;

an underlayer film formed on the diamond-like carbon film;

and

5 a thin film transistor formed on the underlayer film.

7. A device according to claim 6, wherein the substrate is a  
quartz substrate.

10 8. A device according to claim 6, wherein the diamond-like  
carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

9. A device according to claim 6, wherein said semiconductor  
device is an active matrix type display device having a pixel region  
15 and a driver region on the substrate.

10. A device according to claim 6, wherein said semiconductor  
device is selected from the group consisting of a personal computer, a  
video camera, a mobile computer, a goggles-type display, a player  
20 apparatus having a recording medium, a digital camera, a front type  
projector, and a rear type projector.

11. A semiconductor device, comprising:

a thin film transistor formed over an substrate having an

insulating surface;

an interlayer insulating film formed over the thin film transistor; and

a diamond-like carbon film formed on the interlayer  
5 insulating film.

12. A device according to claim 11, further comprising a transparent conductive film formed over the diamond-like carbon film.

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13. A device according to claim 11, wherein the diamond-like carbon film has a thickness of 5 to 100 nm.

14. A device according to claim 11, wherein the diamond-like  
15 carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

15. A device according to claim 11, wherein said semiconductor device is an active matrix type display device having a pixel region and a driver region on the substrate.

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16. A device according to claim 11, wherein said semiconductor device is selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggles-type display, a player apparatus having a recording medium, a digital camera, a front type

projector, and a rear type projector.

17. A method of manufacturing a semiconductor device,  
comprising the steps of:

5           forming a thin film transistor on an insulating surface of a  
substrate; and

          forming a diamond-like carbon film on a back surface of the  
insulating substrate.

0           18. A method according to claim 17, wherein the substrate is a  
quartz substrate.

          19. A method according to claim 17, wherein the diamond-like  
carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

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          20. A method according to claim 17, wherein said semiconductor  
device is an active matrix type display device having a pixel region  
and a driver region on the substrate.

20           21. A method according to claim 17, wherein said semiconductor  
device is selected from the group consisting of a personal computer, a  
video camera, a mobile computer, a goggles-type display, a player  
apparatus having a recording medium, a digital camera, a front type  
projector, and a rear type projector.

22. A method of manufacturing a semiconductor device,  
comprising the steps of:

forming a diamond-like carbon film on an insulating surface  
5 of a substrate;

forming an underlayer film on the diamond-like carbon film;  
and

forming a thin film transistor on the underlayer film.

10 23. A method according to claim 22, wherein the substrate is a  
quartz substrate.

24. A method according to claim 22, wherein the diamond-like  
carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

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25. A method according to claim 22, wherein said semiconductor  
device is an active matrix type display device having a pixel region  
and a driver region on the substrate.

20 26. A method according to claim 22, wherein said semiconductor  
device is selected from the group consisting of a personal computer, a  
video camera, a mobile computer, a goggles-type display, a player  
apparatus having a recording medium, a digital camera, a front type  
projector, and a rear type projector.

27. A method of manufacturing a semiconductor device,  
comprising the steps of:

forming a thin film transistor over a substrate having an  
5 insulating surface;

forming an interlayer insulating film covering the thin film  
transistor; and

forming a diamond-like carbon film over the interlayer  
insulating film.

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28. A method according to claim 27, further comprising a step of  
forming a transparent conductive film on the diamond-like carbon  
film.

15 29. A method according to claim 27, the diamond-like carbon film  
has a thickness of 10 to 100 nm.

30. A method according to claim 27, wherein the diamond-like  
carbon film has a specific resistance of  $10^7$  to  $10^{14}$   $\Omega\text{cm}$ .

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31. A method according to claim 27, wherein said semiconductor  
device is an active matrix type display device having a pixel region  
and a driver region on the substrate.

32. A method according to claim 27, wherein said semiconductor device is selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggles-type display, a player apparatus having a recording medium, a digital camera, a front type projector, and a rear type projector.